The MAC Flyer

MAY 1979

Know 'Em Blindfolded . . . page 18

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The MAC Flyer

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For Greater Safety and Efficiency
in MAC Air Operations

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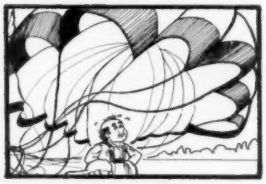

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FLYER FORUM

The Flying Dutchman of MAC

Most of us MAC aircrewmembers have felt it before—the uneasy feeling that circumstances have led us to being stuck out in the system, and that fate will conspire against us to insure we'll never return home. It is perhaps the nightmare of all nightmares, being cast into the MAC system to fly for eternity away from home station.

One night I met a crew at a staging base that came close to the famed Flying Dutchman legend. They were from one of our sister C-130 units and asked if we minded sharing our bus with them. As they boarded, they seemed particularly haggard and fatigued. I noticed that each one of them had a couple days growth of beard and was carrying nothing more than a helmet bag. They had been pulled out of their local pattern on a one hour "out and back" and were on their sixth day without a change of clothes between them.

I started thinking about a Flying Dutchman crew and of ways it could happen. I figured that, like this crew, the easiest way to get stuck out in the system was through one add-on mission after another. But what if you added maintenance problems, parts delivery, DNIF crewmembers, crewrest declarations, etc., to it?

Imagine the Flying Dutchman crew, traveling the MAC airways, always picking up that extra line, extending their crew duty day and airplane to their limits. Every time they call numbered air force, they receive an add-on mission. Every time they transit the area of control from one numbered air force to another, they are diverted. Every time they call command post for arrival, the message always reflects alpha three maintenance status. Their itinerary paperwork was thrown away weeks ago. Gradually the name of the aircraft commander and the tail number become familiar sights on controller's status boards. To remove them would somehow result in the loss of a couple of old friends.

The original Flying Dutchman was condemned to sail the seas until he could find a lover who would be true to him in his absence. He found his rest when his lover threw herself into the sea out of a mixed sense of faithfulness and grief.

Salvation for the Flying Dutchman of MAC is effective command and control, and the aircraft commander participating fully in the decision making process. It is quite possible for communication gaps between numbered air forces, command posts, and ALCEs to extend a crew in the system longer than necessary. Controlling agencies have the responsibility to share all relevant information when a hand-off of control occurs. Likewise, it is up to each aircrew to be certain that controlling agencies are aware of any factor which might affect their capability to perform the mission.

When the aircraft commander finds the parameters of his authority too narrow, he may very well discover himself in command of nothing more than a Flying Dutchman crew, doomed to fly endlessly at the bidding of some unseen force.

Capt Randy P. Durham
773 TAS
Dyess AFB, Texas

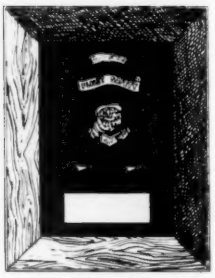
You're right, Randy, being stuck out in the system longer than necessary could be a nightmare, and certainly is a waste of aircrew resources. Luckily, Murphy doesn't usually heap quite so many dilemmas on a crew during one trip, but your point is well taken. We do need to be alert to abuses or misuse of aircrews by the system, which (although it works amazingly well most of the time) is not infallible. One tip: as soon as you think your crew is being taken advantage of or misused, start keeping accurate notes that include dates, times, names of key players and circumstances, and then file an official complaint without delay. That's about the only way a bad situation is sure to be rectified expeditiously. —Ed.

1978 MAC Safety

The MAC Trophy for Flying Safety

Presented to the MAC air force or service with the most effective flying safety program as determined by flight mishap rate, severity and causes of mishaps, and mission.

Aerospace Rescue and Recovery Service



MAC Distinguished Flying Unit Safety Award

Presented to the best unit from among those receiving the MAC Flight Safety Achievement Award.

463d Tactical Airlift Wing, Dyess AFB

MAC Support Safety Achievement Award

Presented to airlift support units which have an exceptional quality of services and successful accident prevention programs.

TUSLOG Det 175
603 MASS, Kadena AB
605 MASS, Andersen AFB
611 MASS, Osan AB
619 MASS, Hickam AFB
625 MASS, Torrejon AB

MAC Flight Safety Achievement Award

Presented to wings or equivalent units that are accident free and have effective flight safety programs.

39 ARRW, Eglin AFB
62 MAW, McChord AFB
63 MAW, Norton AFB
76 MAW, Andrews AFB
374 TAW, Clark AB
375 AAW, Scott AFB
436 MAW, Dover AFB
437 MAW, Charleston AFB
443 MAW, Altus AFB
463 TAW, Dyess AFB

Award Winners

MAC Safety Officer of the Year Awards

Primary Duty

Capt James C. White,
37 ARRS, F.E. Warren AFB

Additional Duty

Capt James S. Elder,
605 MASS, Andersen AFB

MAC Safety NCO of the Year Awards

Primary Duty

TSgt Thomas G. Miller III,
62 MAW, McChord AFB

Additional Duty

SSgt Troy Juresko,
463 TAW, Dyess AFB

Call signs can cause confusion, especially during an inflight emergency.

Mactan Mixup

by Maj James G. Gibson II
Supervising Editor

Back in the mid-60's, when the Vietnam conflict was getting underway in earnest, airlift activity through the Philippines took a sharp upturn. Clark Air Base finally reached a point of wingtip to wingtip saturation, and somebody decided to start routing some of the traffic through the airfield at Mactan, a small island just offshore from Cebu City, the second largest metropolis in the Philippines. Situated about 350 miles south of Manila, Mactan was ideally suited to take some of the pressure off overtaxed Clark.

From an aircrew standpoint, opening Mactan for heavy use by the Air Force provided a number of interesting challenges and adventures. Although it wasn't a bare base, in the beginning Mactan was pretty austere. Few Americans had been there since the end of World War II, and for the natives it was almost as exciting at first as if General MacArthur himself was returning each time a crew came through. Those lucky enough to be sent downtown to crew rest in one of Cebu's modern hotels—instead of sweltering in one of the frame and screen "hooches" on base—were treated to a welcoming chorus of "Hi, Joe!" from hundreds of smiling Filipinos as the crew bus bounced along the narrow roads through the barrios. Later, when the base facilities were more Americanized and permanent, and the sight of GI's was no longer a novelty, much of the initial charm of Mactan vanished.

After awhile approaches and landings became pretty routine, too, but that was a welcome change from the first days when standard approach plates for the airfield weren't even available. The first crews flying into Mactan had to make due with a thermofaxed copy of a Jeppeson airfield diagram of questionable heritage and vintage, and a frequency that was reputed to be good for contacting the tower. Things were breaking fast in those days, though, and the excitement of being among the first crewmembers travelling to a strange, out of the way Philippine airstrip left over from WW II more than compensated for the initial lack of amenities.

One amenity we couldn't do without safely, however, was clear communication between us and the folks on the ground. Most of the time there was no problem because American controllers were installed pretty early in the game; but even the GI's weren't infallable . . . as we found out the hard way one fine, sunny afternoon on our way in from a long (Wake - Guam - Mactan) overwater day in our four-engine turboprop Cargomaster.

There were several airplanes in the pattern when we arrived, and we were sequenced into a spiraling stepdown over the island. Everything was going smoothly, the scenery was beautiful, and we were speculating on our chances for going downtown when the routine radio chatter suddenly got serious.

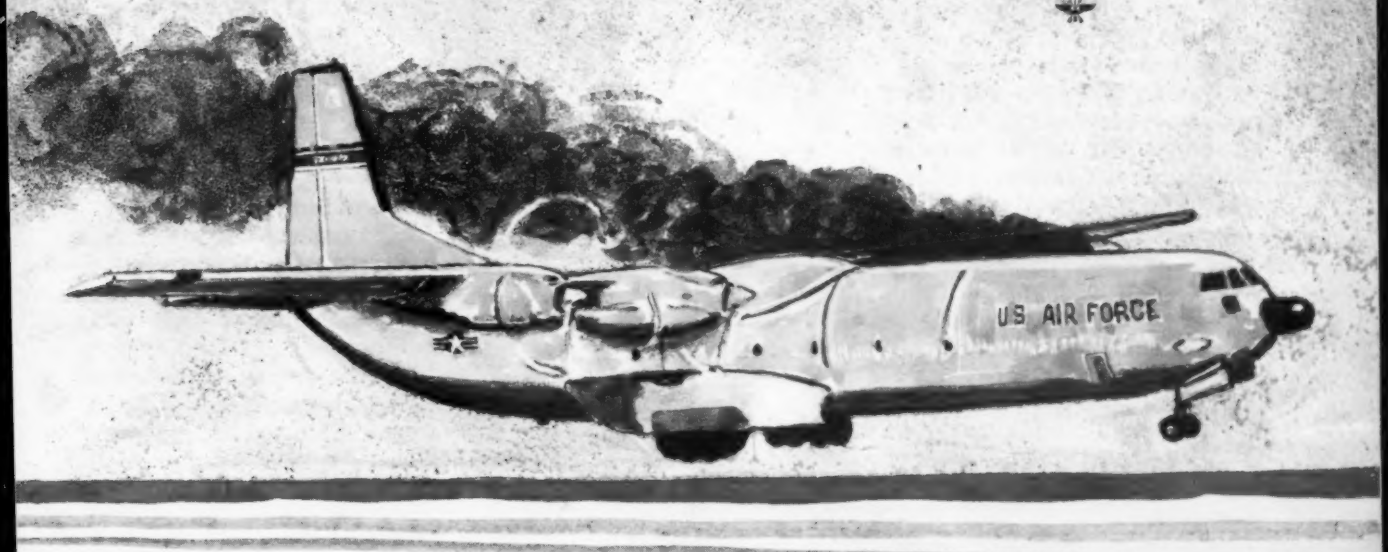
"Aircraft one - three - three," announced an excited voice, "you have smoke coming from your number one engine." Immediately, all available perspex was filled with pressed noses and searching eyes trying to see where the unlucky devil with a call sign of one-three-three and an engine fire was located. A quick scan of the gages showed our engines to be operating fine, and the aircraft commander pressed on with the downwind leg of the approach, since we had moved up to next in line for landing.

Again, and a little more tensely this time, the voice came over UHF/VHF/Guard, "Repeating, MAC aircraft one-three-three, you now have thick white smoke coming from your number one engine." All of us looked

around the cockpit at each other. A perplexed expression was on every face, because none of us had been able to spot what should have been easy to see. Turning on the dogleg to final, the AC sent the second engineer downstairs to scan our number one and see if it was okay, just in case, and despite the fact that our gages were all indicating normal and our call sign was MAC 62011. The scanner had no sooner departed the flight deck when a lot of things began to happen very rapidly. First was his excited report over interphone. He could see number one through the cargo compartment window and said it was streaming a thick trail of white smoke. On the heels of his announcement, the panel engineer broke in with the news that our number one oil pressure and quantity gages had just dropped to zero. Almost overcome by events, the controller finally got his act together about this time and broadcast in a voice about two octaves above normal, "MAC C-133, tail number 62011, you now have smoke and flames coming out of your number one engine!"

We were less than a mile from touchdown; the AC calmly continued to maintain the glide path with his left hand on the yoke, while he reached up with his right and feathered number one. His touchdown, just as he finished activating the fire bottle, wouldn't even have tipped over a Sanyo flashlight balanced on the console. The emergency was handled so calmly and smoothly, in fact, that we had cleaned up the after-landing checklist and were watching the firefighters hose down number one when it occurred to someone that maybe we ought to evacuate—since part of the airplane was, after all, on fire.

Looking back on this little episode now, it seems sort of humorous and ironic the way the controller used our aircraft type-designator instead of using our call sign to try and warn us of our problem. We spent quite a while looking for another plane with a call sign of "MAC one-three-three" and an emergency, when all the time it was our C-133 with the problem. The delayed alert takes on added significance in light of the fact that our fire warning system failed to perform as advertised (it didn't come on until after we had already touched down). With good communication initially, the controller could have provided us the safety margin that our fire warning system failed to. Thinking about how serious a disaster we could have suffered if the turbine had "let go" and peppered number two engine and the fuselage with shrapnel, or if it had seized and caused the prop shaft to shear, I get goose bumps. But luck was with us. None of those things happened and we were able to make a safe and "uneventful" landing. Had events gone the other way, the safety margin provided by an early and clearly communicated warning from the controller could easily have been the critical determining factor between a "routine" engine shutdown on approach and a full-scale emergency with all kinds of potential for a catastrophe.



The Flying Circus

HURRY, HURRY, HURRY! STEP RIGHT UP . . . for the greatest aggregation of aerospace antics ever assembled. We've traveled the Globe and spared no expense to bring you a humorous heap of high flying hijinks guaranteed to lift the lagging spirits of the gloomiest Guss, most morose Morris or the dolefullest Doris.

Here they are: from Main to Monterey; from San Jose to Sydney; from Ipswitch to Usu. We've got high wire acts with no net, freight trains and daredevils, live volcanos, Mexican melodrama, and special appearances by two distinguished athletes, both of whom are aces, and more.

And now may I direct your attention to the center ring!

High Wire Act

The Cessna 150 was flying along at a low altitude and hit a power line which crossed above some railroad tracks. Not only did the ill-fated craft crash on the tracks below, it was promptly run over by a passing freight train . . . Beep, Beep!

Board Strike

A midair collision between a biplane and a biped's surfboard just off the northern coast of Oahu is under investigation by both the FAA and Robert Ripley. Witnesses reported that a home-built Baby Great Lakes aircraft was flying within a few feet of the water in the vicinity of a number of surfers. One of the surfers, seeing the aircraft heading toward him, tumbled off the rear of his surfboard causing it to shoot out of the water and strike the wing of the aircraft. FAA said the wing of the plane was slightly damaged, but the pilot was able to land safely. More intriguing than the incident itself are the two telephone calls FAA received shortly after it occurred. One was from the surfer who wanted them to do something about the pilot and the other was from the pilot, complaining about the person who "threw" a surfboard at his aircraft.

Bye, Bye Birdie!

A single-engine airplane doing low-level mosquito spraying was struck by a hard-hit golf ball that passed through the propeller, smashed through the windshield, bounced off the pilot's helmet and shattered a side window. Although stunned by the impact and injured by flying glass, the pilot kept control of his aircraft and made an emergency landing at a nearby airstrip.

Next Time Try Drano!

Not too long ago a licensed mechanic (who certainly should have known better) employed a unique method to unstop an airplane toilet. Noting that the lavatory drain aperture in the bottom of the fuselage and the air start hose were about the same size, he decided to use pressure from the air start cart to blow an obstruction out of the latrine. Seating himself on a board placed atop the toilet, he shouted down to his accomplice below to start the aircart. The results were predictable. The tremendous pressure blew everything out of the thundermug with great force, pinning the hapless mechanic against the lavatory ceiling. It took three hours to clean up both the mechanic and the cubicle.

The rights to this story were sold to a well known movie mogul who built an Abbot and Costello comedy around it.—Ed

Airborn Big Brother or Eye in the Sky

Specialist John Giles of the Thermal, California, Flight Service Station is used to receiving calls for help from pilots, but he received one recently that was decidedly different. It started like most mayday calls, with a voice on the radio, "Thermal radio, I have

a unique problem. You're not going to believe this, but I departed Bermuda Dunes a few minutes ago and right now I'm flying over my home. I can see two guys in a white pickup truck ripping it off!"

Giles got the pilot's address and relayed it to the police. A squad car arrived just in time to see the white pickup leaving the scene. The culprits were quickly corralled and the incident ended happily for the eagle eyed pilot. Moral: You never know who may be watching . . . or from what vantage point.

Checklist Item

The copilot of an OH-58 had started the preflight and got as far as the tail rotor gearbox section when he had to leave the aircraft for a minute. He laid the checklist on the tail cone and asked the pilot to continue from that point. Using his own checklist, the pilot resumed the preflight. When the copilot returned, the pilot was finishing up and told the copilot to get into the aircraft. Together, they finished the interior, start and runup checks. After picking the chopper up to a hover, the pilot started a left pedal turn, but before he could complete the turn, the copilot's checklist that had been left on the tail cone hit the tail rotor blades, damaging them and the 90-degree gearbox.

Close, But No Tortillas

A happy-go-lucky crew was ferrying a 707 from the U.S. to Mexico. ATC cleared the flight for the VOR approach; the captain reported the airport in sight through the clouds and asked for a visual approach to the southeast oriented runway. The first officer made a faultless visual approach and landing. As the airplane touched down, number one and four engines began whipping through the tall grass growing at the edge of the old runway. The captain realized that they had landed at the wrong airport. A go-around was impossible because the first officer had already deployed the speedbrakes and reversed the engines. They finally got the aircraft stopped on the 4,500-foot slab and shut down one and four. Still in contact with the tower at their original destination only seven miles away, they requested that servicing personnel and a mechanic be driven out to look at the engines for possible FOD. After the mechanic arrived and made an inspection of the engines, the captain arranged for some local hombres to clip the tall grass along the runway edge just as a precaution. The short flight to the correct airport was uneventful . . . and silent.

Bottoms Up!

After completing a landing at a large airport, the pilot of the Cessna 172 was instructed to taxi to the ramp via another runway. In acknowledging the call, the pilot dropped his microphone. As he looked back up after recovering it he found himself and his airplane inverted; victims of powerful and fitful gusts of wind.

Fire and Brimstones

A Far East airline's Tristar was cruising along with the crew blissfully unaware that they were about to incur the wrath of one of Japan's normally dormant volcanos. Suddenly Mt. Usu erupted in an eight-mile high pillar of fire and smoke that hurled ash and rocks over a wide area. Several baseball-sized stones hit the airliner, cracking the cockpit window. Luckily, there were no injuries.

Attitude Check

The student pilot became so irritated at his continued poor performance during a training flight that he hit the windshield with his fist, cracking same.

Ignorance is Bliss

As the Boeing 727 touched down in a heavy rain shower, one of the aircraft's flaps somehow fell off. Not having a flap-separation indicator, nobody noticed that it was missing until the airplane was safely parked. The crew was never aware of any problems with the flaps, so in this case ignorance of the situation made for a blissful approach and landing.

Bloody Mary Makes for Happy Landing

Alcohol and aircraft usually spell trouble, but the pilot and

three passengers aboard a Cessna Cardinal RG were able to make a safe landing only because they were equipped with a quart of Bloody Mary mix. The aircraft, a 1974 model, was enroute from Tangier Island off the Virginia coast to South Norfolk Airport. During the flight, the pilot noticed his airspeed was lower than usual and discovered that the plane's retractable landing gear was trailing beneath the aircraft —unlocked in the up position. A radio conversation with the manager of the South Norfolk facility, who also owned the aircraft, resulted in the conclusion that the hydraulic system for the gear was dry. After some discussion between the aircraft and the airport it was decided to pour the Bloody Mary mix into the hydraulic tank and use a hand pump to get the gear into position. The scheme worked, the gear locked down, and the pilot made a safe landing.

Odious Odyssey

After returning from a flight, the DC-10's freight compartment was contaminated by garlic oil concentrate. Extensive cleaning did little to moderate the malodor. Finally, the aircraft was ferried to another airport where it was cleaned for ten hours before it was ready for service—though there was still a lingering bouquet.

We wonder how they got anybody to fly the airplane to the cleaning station? – Ed.

Prop-Pulling Peril

A private pilot, age 17, landed at the Monterey Peninsula Airport to refuel for a flight to San Jose. His equipment was a tandem two-place Interstate SIA powered by a 75 hp Continental engine without a self-starter. This meant that the engine had to be hand propped to start it—just like in the old days. After notifying the Salinas Flight Service Station of his impending departure, the pilot returned to the aircraft, where he lifted the tail and swung it around so it pointed away from the hangars. Tucking his 15-year old cousin in the rear seat, he turned the fuel flow to the "on" position, advanced the throttle and turned on the magnetos. Returning to a position in front of the aircraft, he grasped the prop blade and pulled it down into its turning arc with a snap. The engine caught, then immediately roared to a high rpm.

Unfortunately, there were no chocks in front of the wheels to prevent the aircraft from moving—and no pilot in the cockpit to apply the brakes. The aircraft accelerated forward immediately and swung into a left turn on the parking ramp where it completed two 360 degree "ground loops" before crashing into a flight operations building, shattering the plate glass windows, shearing off its right wing, splintering the wooden prop, and substantially damaging the building. Luckily, there was no post-impact fire and everyone escaped without harm.

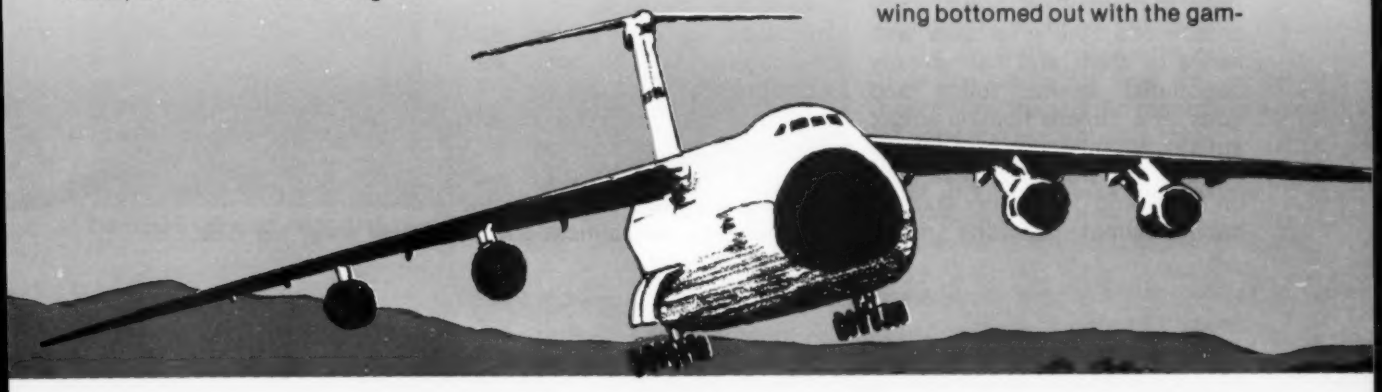
Mishap with a Moral

A Real Wing-Ding

Everything started off routinely enough with a pre-dawn alert and show for a local proficiency sortie. By the time the crew was filed, fed and ready to fly, however, their C-5 was still DNIF, so they spent several hours pounding the ramp until the Galaxy was finally fixed. Since this was primarily a remedial ride for an aircraft commander upgrade candidate who had recently failed a no-notice evaluation, the instructor used a substantial amount of the nearly four-and-a-half-hour delay reviewing a variety of systems and procedures with him.

After a runway abort and another minor maintenance delay, the mission finally got underway in earnest shortly after 1300. Occupying the left seat, the copilot (AC upgrade candidate) made several approaches. Despite gusty crosswinds out of the north-northwest at 20 to 30 knots, all aboard—including another pilot who was riding in the jump seat—agreed that the left-seater was handling the Galaxy extremely well. Before the fifth approach, the IP and copilot swapped seats, and the instructor wrestled the maxi-jet to the runway against the fickle zephyrs for another touch and go, acknowledging on interphone after regaining pattern altitude that getting the bird on the deck had really been a handful.

The sixth approach was to be made by the copilot from the right seat, and he briefed a VFR pattern for a touch and go on the northeast/southwest runway. After discussing it with the IP and engineer, he elected not to use the crosswind gear. Breezes were averaging 350 at 30 knots, according to the tower, so approach speed was adjusted to 125 KIAS to compensate for possible gusts. The maneuver went smoothly until just after touchdown. Suddenly the left wing started to come up. The copilot muscled in full left aileron and the wings began to level. He eased off as the Galaxy evened out, but there wasn't even time to draw a breath before the right wing was once again headed for the concrete as the left wing lifted even higher than before. Battling the unwieldy behemoth, the copilot applied full left aileron to roll the wings level again, followed by full right once more to try and contain the roll. While it should have stabilized, the Galaxy tossed heavily to the right one last time. At about this same instant, the IP decided the situation was getting out of hand, so he took over and reapplied full left aileron and full left rudder, as well as takeoff power. Unfortunately, his action was not soon enough to curb the roll to the right which was then in progress. The right wing bottomed out with the gam-



boling Galaxy's bank angle reading in excess of eight-and-a-half degrees. Finally, after successfully leveling the big bird's wings, the IP completed the tricky touch and go, lifting off with 100 percent flaps.

Meanwhile the tower controllers had been watching the seesawing C-5 from their vantage point, and had observed what looked like contact between the Galaxy's right wingtip and the runway surface. They advised the crew of their suspicions, but a visual scan of the airborne air machine revealed no apparent damage. During post flight inspection, however, the scars on the aluminum told a different story. Although the crew did not feel the impact, the right wingtip had indeed contacted the runway, and so had the forward slat and the number four engine nacelle. Altogether, the quick and almost undetected scrape had done nearly $140,000 damage.

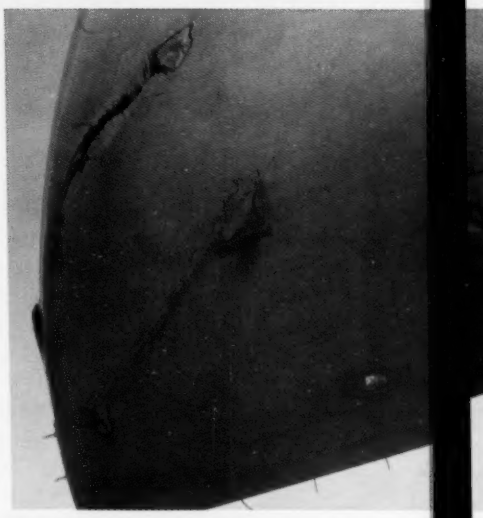
. . . the scars on the aluminum told a different story

No mechanical malfunctions could be related to the problem, visibility was excellent, and although there were some gusty crosswinds, the crew was well aware of them and had already negotiated several touch and goes in a superb fashion under similar conditions. So, on the surface, it would appear that on touch and go number six, the copilot simply couldn't maintain control on the roll and the IP failed to take over soon enough to prevent the mishap.

A safety investigation board looks at a variety of things while they're investigating a mishap, and this one was no exception. Probing behind the scene a bit, they discovered some management factors that helped set the stage for this misfortune long before the crew assembled at base operations to go fly.

The copilot had obtained a job in wing ops shortly after returning to flying duty from a three-year rated supplement tour, and was spending nearly all his time working at his "extra duty"—especially after his reporting official was changed from someone in the squadron to his boss in the wing. His training folder reflected several recommendations from instructors that he needed to fly more often. Eventually, he even went noncurrent, but did well enough on subsequent training flights to garner a recommendation that he be entered into the AC upgrade program. Following a couple more laudatory practice rides, however, he failed a spot AC checkride in the local area. It sounds ironic now, but his main Q-3 areas concerned approach and landing difficulties.

Being a conscientious type, this copilot (a former C-5 AC) was hitting the books enough to impress his instructors and evaluators, but he was also spending the bulk of his time working at his "extra duty." Regulations require that anybody who fails a checkride must be removed from all duties not pertinent to requalification so that they can devote their undivided attention to flying, but this policy was basically ignored. In fact, the potential AC worked at wing ops over 15 hours total



Right wing, bottom view.

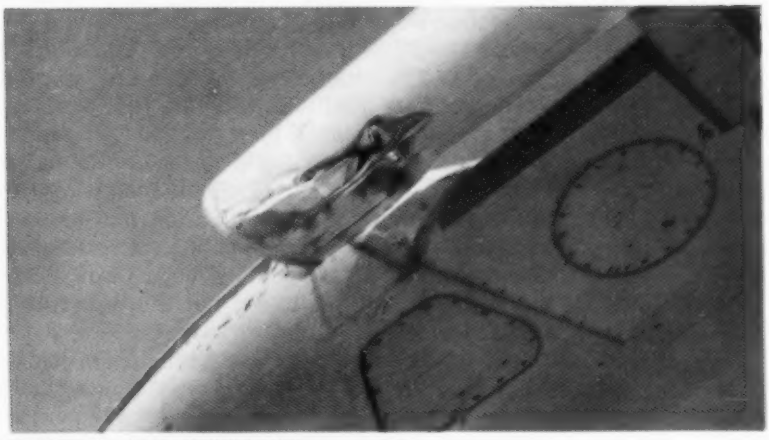
Right wing, top view.

on the two days preceding the mishap despite his "busted" checkride.

Several aspects of the "additional duty" factor seem to have the potential for stacking the odds in favor of this needless accident happening:

- The copilot's flying skills were documented as having been adversely affected by the amount of attention he was devoting to his job at wing ops, but his work there was allowed to continue unchecked.
- The copilot was not formally placed into the AC upgrade program, with the implied and explicit caveat that upgrade activity should now take precedence over additional duties.
- Even after a Qual-3 checkride, the copilot was not formally relieved of his extra duty responsibilities.

Bottom of number four engine nacelle.



Outboard edge of right slat.

Just how much these factors contributed to setting up the accident would be difficult, if not impossible, to determine. But they cannot be ignored as having played some part, especially if you subscribe to the "chain of events" theory of accident cause and prevention.

There is only a certain amount of academic satisfaction to be gained from knowing that someone else, or the vagaries of a system, helped you in going down the tubes. It sometimes eases the sting to find something or somebody to share the blame, but as we all know from experience, pilots are primarily responsible for their own actions and the safe conduct of the assigned mission. Short of a catastrophic structural or mechanical failure, or an act of God, pilots generally receive the credit or the blame for how well or how poorly they fly. So regardless of what the system sets them up for, pilots are still the last and best line of defense against an accident.

Critical Tire Failure Speed

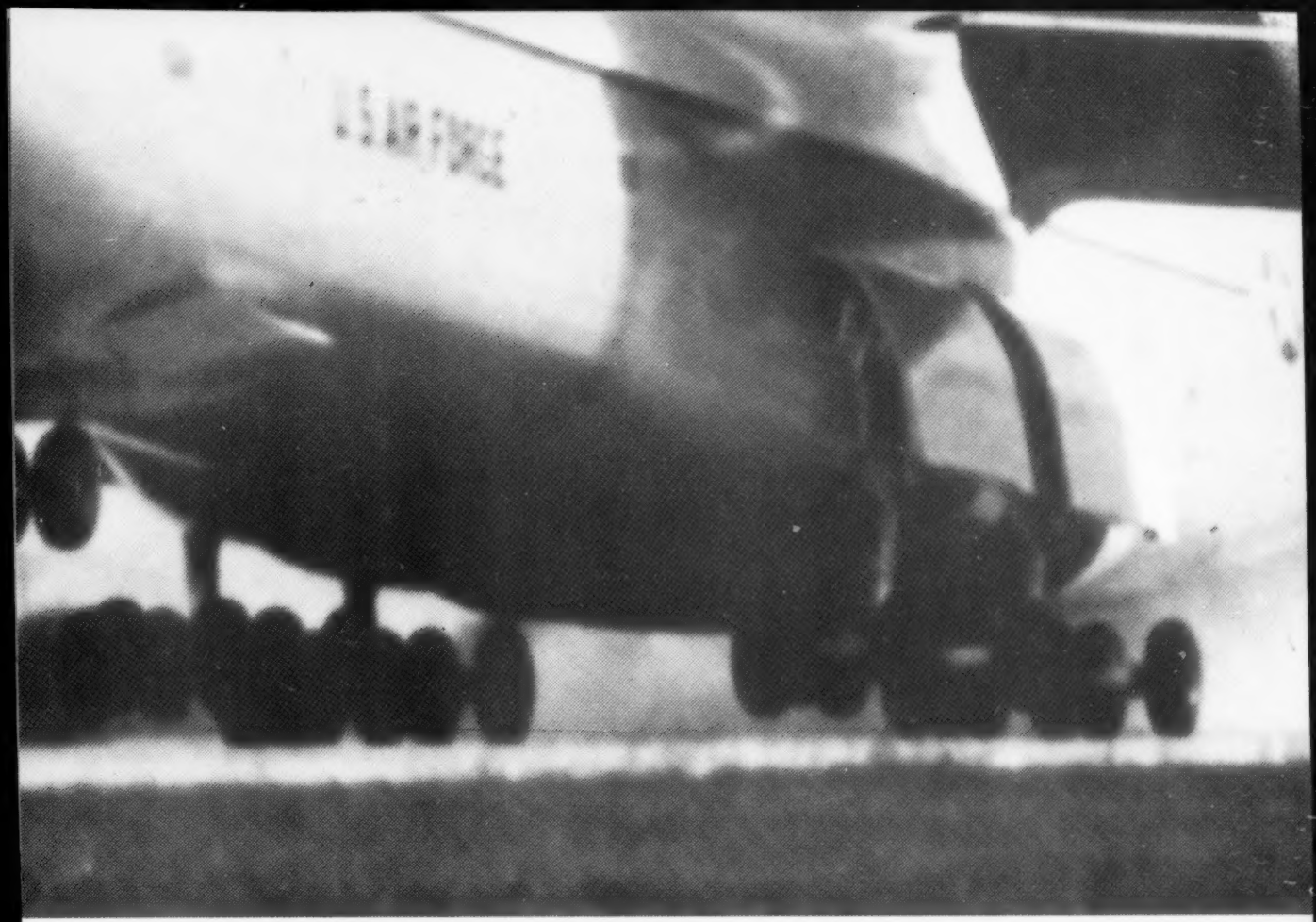
A blown tire may lead to an untimely departure . . . from the runway.

by Capt Charles M. Westenhoff
1868 FCS (AFCS)
Rhein-Main AB, Germany

You're approaching decision speed in your Sabreliner, and the left main tire blows. Despite your skill and cunning in perfect coordination with Dash One abort procedures, you leave the departure end of the runway traveling at 68 knots. Wonder why you didn't stop as advertised? What went wrong? To find out let's review some of the things that affect our ability to stop an aircraft—like weight, speed and braking efficiency.

First, a short refresher in physics. You may recall that the momentum of a moving body equals its speed times the object's weight (momentum = speed X weight). For us pilots, that roughly means the heavier an airplane is or the faster it's moving the greater the distance required to stop it. The only way to practically reduce that stopping distance is to increase braking efficiency. However, effective brakes require wheels and tires, in that order, to do their job properly. Any decrease in the normal amount of rubber touching the pavement reduces your capability to stop on the remaining runway. After all, even with anti-skid, the amount of stopping power you get from that flapping rubber rag is very limited. So far I probably haven't said anything you don't already know, but the review didn't hurt a bit. In any event, we haven't solved the original puzzle: why we didn't stop as advertised in the charts. Let's look at those charts for an answer.

Most of the charts used to figure critical field length and refusal speed consider gross weight, temperature, density altitude, speed and RCR. Each factor affects the ability of the aircraft to stop—not a startling revelation. And there's not too much we can do about any of these in a high-speed abort situation; they can therefore be considered constant once we've figured our data. If the above is true, then what are the variables in our stopping ability? First, you might mention reaction time, but that is also taken into account in the charts themselves. Everyone reacts at a different rate in an abort situation, but since the charts are designed on the conservative side, only a gross failure to take "timely" action would cause us to wave goodbye to the departure end of the runway while still on the ground. So what's next? Well, we already mentioned braking efficiency, That too, is considered in the charts, which leaves us no other place to go except the amount of "good" rubber on the ground. That brings us to the answer to the original question: we just didn't have enough good rubber between us and the



ground to stop "as advertised."

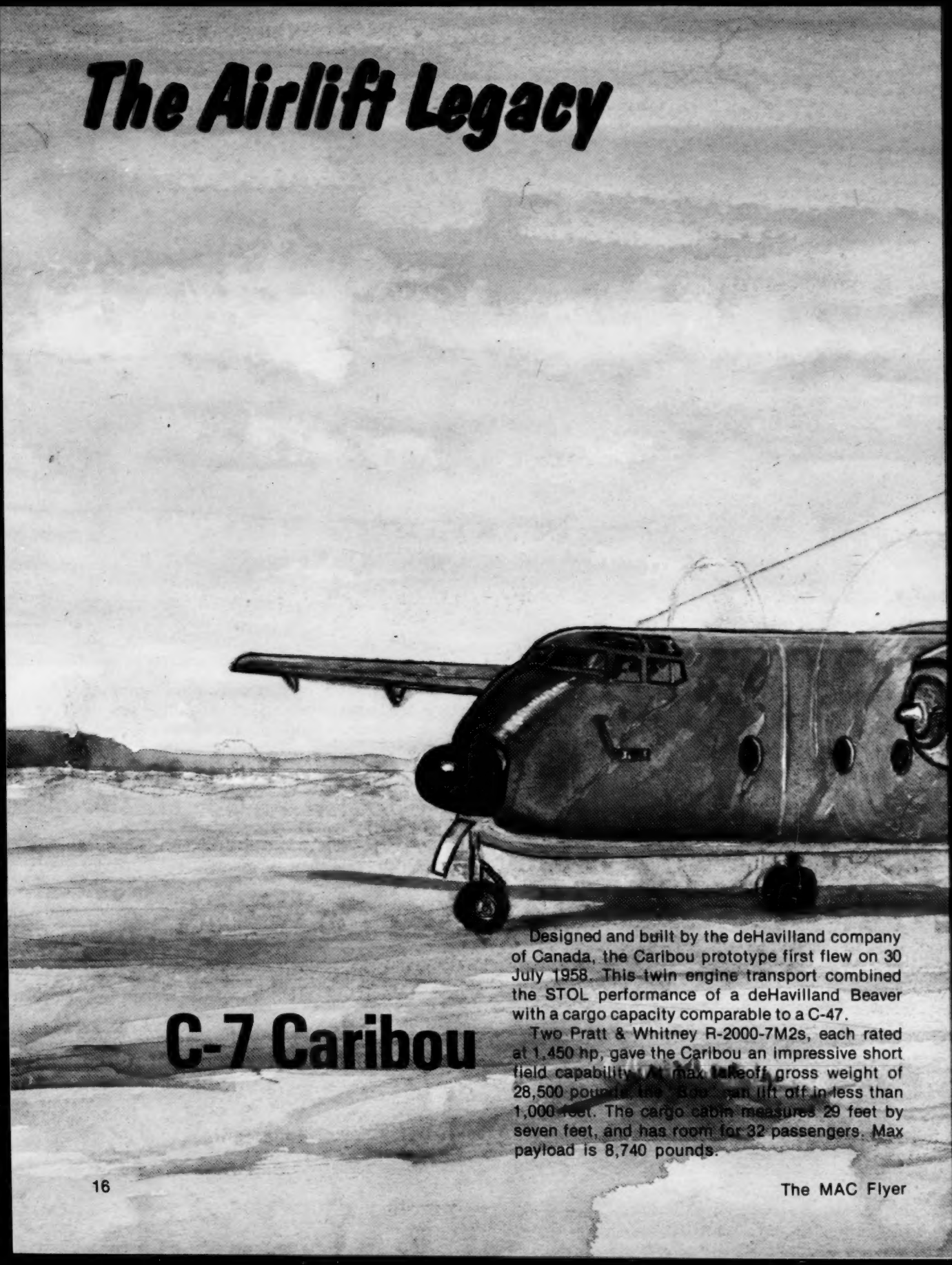
I'll bet you knew that all the time, didn't you? And now you're saying, "So what? It's pretty tough to change a flat tire doing 113 knots!"

Right!! I just wish I had a foolproof answer for you, but I don't. However, here are a few suggestions you might consider before you make that next takeoff.

The real answer to our question of what went wrong might be planning. In any time-critical emergency, your reactions are quicker if you are ready and have planned ahead. Begin with your preflight; make sure all the tires, wheels, and braking systems meet your standards (you might also review the T.O. standards). Then make sure you understand what your performance charts are telling you and plan for what that blown tire approaching refusal speed may cause. Even if you reject well below decision speed for a blown tire, the time you use slowing the aircraft could become a real problem while minus one or more good rollers. You may already have a lot of "worthless" runway behind you. The other side of that coin is that, depending on when the tire goes, you might be better off continuing the takeoff. After all, you'll have considerably more runway available for stopping during the landing attempt than for a high-speed abort. And you may be able to significantly reduce gross weight.

The point of the matter is that planning and serious thought to the problem beforehand could go a long way in saving your day. Remember too, if a second of hesitation hurts, a halfhearted effort hurts nearly as much, and changing your mind could prove to be the coup de grace. One last point; tire failure during takeoff may appear to be a remote possibility and not worth devoting much attention to. Just in case you are of that mind, you might check an FAA study that concluded, "Tire, wheel, and brake failures accounted for 78% of all aborts which resulted in aircraft running off the runway."

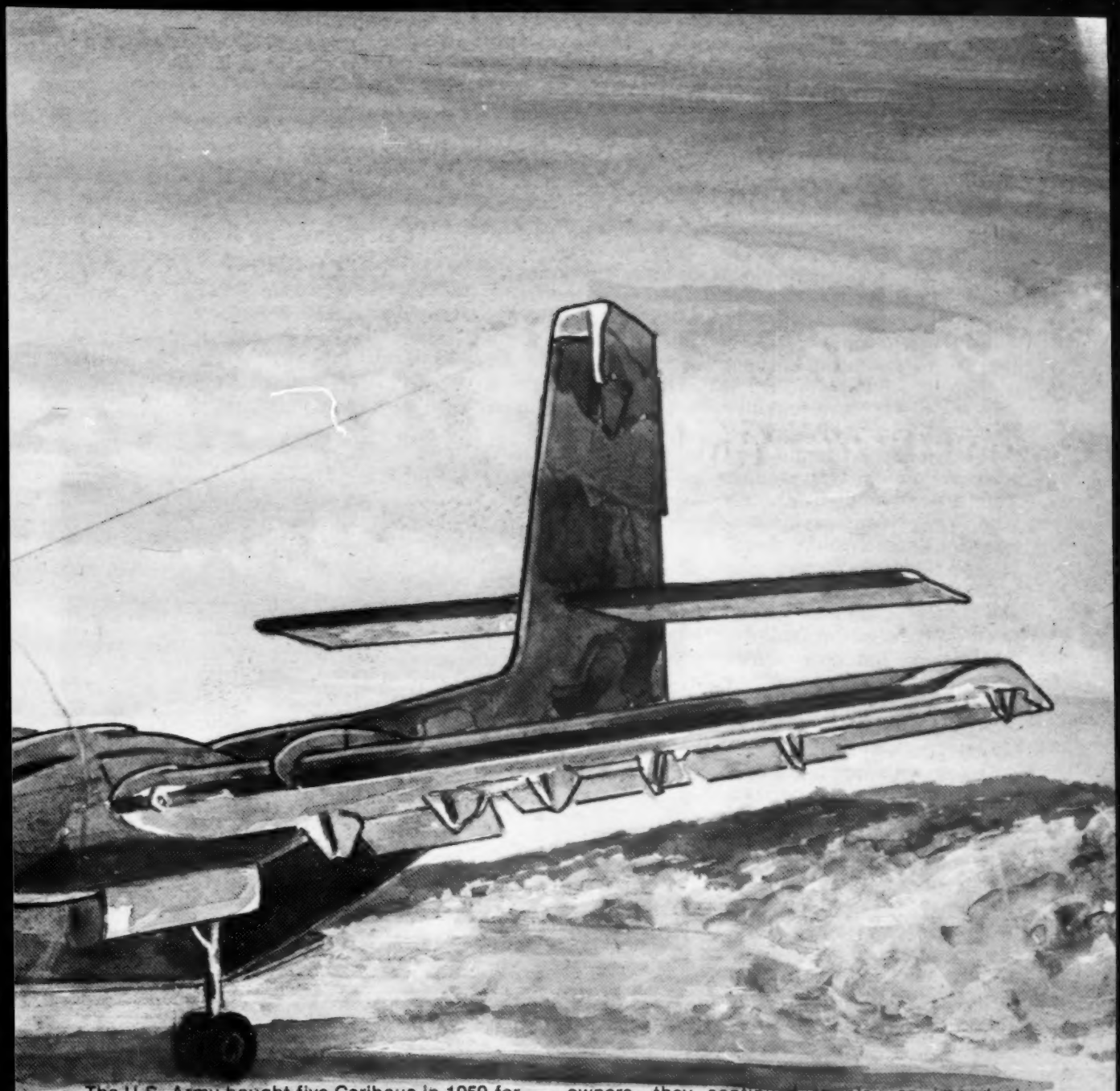
The Airlift Legacy



C-7 Caribou

Designed and built by the deHavilland company of Canada, the Caribou prototype first flew on 30 July 1958. This twin engine transport combined the STOL performance of a deHavilland Beaver with a cargo capacity comparable to a C-47.

Two Pratt & Whitney R-2000-7M2s, each rated at 1,450 hp, gave the Caribou an impressive short field capability. At max takeoff gross weight of 28,500 pounds, the Caribou can lift off in less than 1,000 feet. The cargo cabin measures 29 feet by seven feet, and has room for 32 passengers. Max payload is 8,740 pounds.



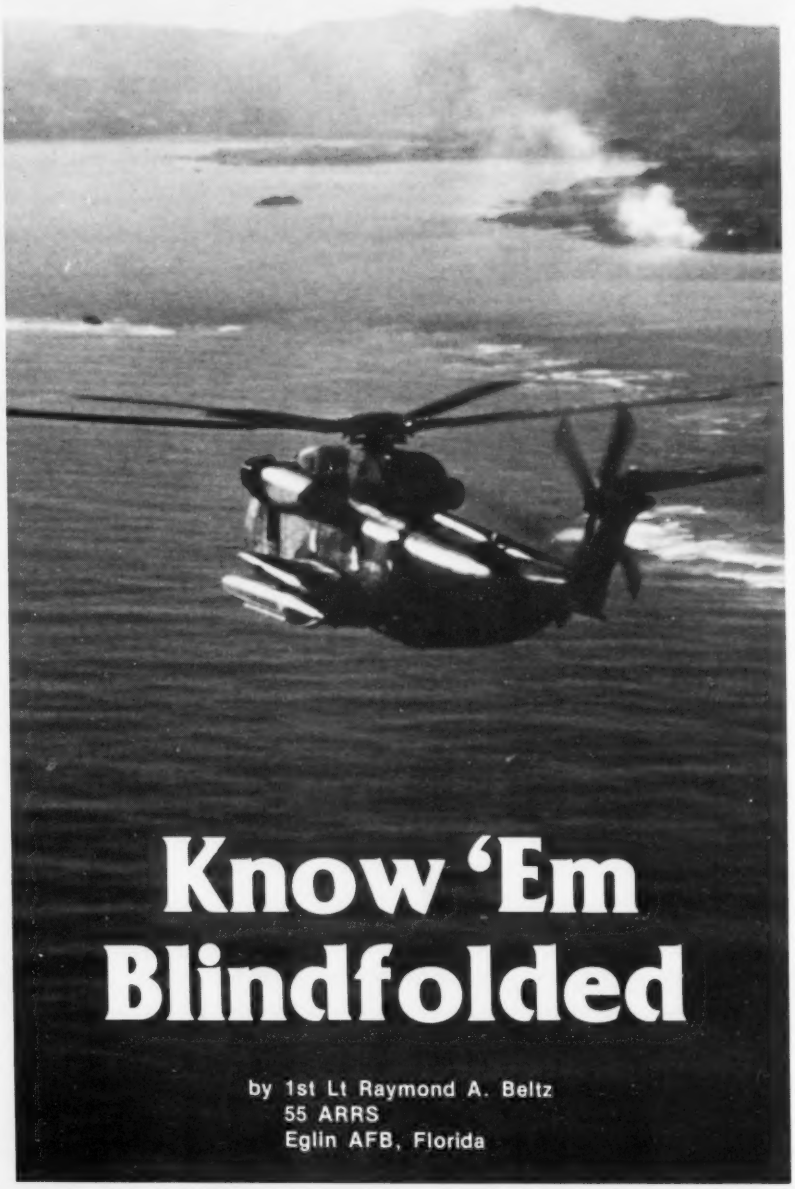
The U.S. Army bought five Caribous in 1959 for evaluation, and after putting these test birds through their paces, awarded deHavilland contracts for 159 production models under the designation CV-2. During the next few years they were used extensively by the Army in Southeast Asia for intratheatre airlift. One was even converted to a flying command post and used by the 1st Cavalry Division.

In 1967, under an intra-service agreement, the 134 Caribous still in service were transferred to the Air Force and redesignated the C-7. With new owners, they continued to play an important tactical airlift role in Southeast Asia.

The Caribou was sold to many countries and may be spotted flying almost anyplace from Canada to New Guinea. The USAF C-7s now belong to Air Reserve Force units that continue to demonstrate the aircraft's airlift capability by successfully participating in many major joint training exercises, some even involving trans-oceanic flights to reach deployment areas in Europe.

Honorable Mention, 1978 MAC Flying Safety Writing Contest

If Charlie was going to live to see his wife again, he had to get out of the sinking aircraft.



Know 'Em Blindfolded

by 1st Lt Raymond A. Beltz
55 ARRS
Eglin AFB, Florida

You couldn't ask for a nicer, more beautiful afternoon. The sun had been out all day and the clouds weren't due to roll in until after dark. It was on days like this that Second Lieutenant Charles R. Ellison was glad that he was the owner—along with the bank—of a beach-front home. It was a perfect day, with little to do but enjoy the sunshine.

"Beep, beep, beep! Alert crew report to rescue ops. You are scrambled at this time. Verify message by telephone. Rescue ops clear," chirped the pocket pager.

Charlie grabbed his books and beach gear and headed for the house. His wife, Julie, met him at the door. "Crew rest is over, Honey," he called. "Phone the squadron and tell 'em I'll be there in ten minutes."

Before Julie hung up the phone, Charlie was out the door and in his car. Being the newest lieutenant in the unit, he was very excited—this was his first turn on alert.

Arriving at the squadron, he headed downstairs to rescue operations. It was now 14 minutes since the alert call.

In short order the aircraft commander, Captain Ed Fuller, the flight mechanic, Sergeant Milton Balke, and the pararescue specialist, Airman John Serchik, arrived. Lieutenant Colonel Clifford stepped to the podium and opened his information folder.

"Captain Fuller, we have a request to send a chopper up into the mountains to pick up a mother and her premature baby," charged the colonel. "After takeoff, you will fly over to the base hospital and

pick up two medical people to assist in the evacuation. As soon as you have the passengers aboard, you'll fly them to Capital City Muni. There, an ambulance will meet you and carry the mother and baby to the University Medical Center."

When Charlie arrived at the H-53, the medical gear had already been secured and seconds later, Captain Fuller hustled out after making a final weather check. Quickly the crew ran the checklists, started engines, called for the clearance and were on their way. It was a short hop to the hospital where a doctor and med tech boarded with a portable, self-contained incubator.

The journey to the mountains took about an hour. As they entered the landing area, the low level maps were unfolded, and the checklists and briefings were completed. Ellison navigated the H-53 to the cabin.

As soon as the wheels were on the ground, Airman Serchik and the medic grabbed the stretcher with the incubator attached and headed for the cabin. The doctor had already sprinted to the rustic house. Some 15 minutes later they returned with the baby and mother. As soon as the incubator was secured and the mother placed comfortably on a litter, they were ready to take off.

The flight to Capital City Muni was uneventful once they had safely departed the mountain clearing. It was well after dark when they landed from a VOR approach to the main runway.

On the ground, the medical team accompanied the mother and child to the hospital while the crew waited. The local flying service people seemed to know what they were doing as they helped Sergeant Balke refuel the Super Jolly, so the officers retired to the snack bar for a bite to eat and a call to Flight Service to check the weather for the trip home. The doctor and medic returned about an hour later with good news. The patients were doing well.

Charlie finally relaxed a little. The flight home was along a Victor airway that paralleled the coast. Only the lights outlining the shore were visible as the copilot flew the H-53, trying to keep everything centered and looking forward to getting home. He now had a real rescue story of his own to tell.

Suddenly, an explosion reverberated through the Jolly Green. The first bang was followed by two lesser blasts. Charlie instinctively lowered the collective. He glanced at the engine instruments and saw that all the number-two indicators were winding down. The realization hit him with sudden force—they had just lost an engine. He swung the helicopter toward the shoreline.

"I have the aircraft." Captain Fuller stated calmly as he began calling out bold-face procedures, "Throttles—full forward."

Seconds later, the left engine started to surge. The instruments jumped wildly as the turboshaft whined and banged. Before the AC could roll back the throttle on number one, it popped and flamed out. Now the crew was locked in a race with gravity as the captain began an autorotation toward the coast.

Passing 2,000 feet the right-seater punched off the aux tanks to lighten the descending helicopter. Charlie called out 500 feet and made a last call to center, "Mayday, mayday, mayday! Rescue 476 is ditching at the Softown 067 radial at 29 miles. Six souls on board."

Watching the radar altimeter, the AC flared the helicopter, reducing the airspeed to near zero. Now the Jolly Green followed a near-vertical path downward. The rotor rpm increased until the collective was pulled in. Captain Fuller leveled off a few feet higher than he had intended to. The big chopper held a hover momentarily and then dropped into the ocean like a rock.

The helicopter hit the water with enough force to blow out the right and left chin bubbles. The transmission cover broke loose and slid forward over the cockpit. A section of the number two engine EAPS came off and struck the crew compartment door. Water rushed into the Super Jolly.

"Is everyone okay? Sergeant Balke, is everybody all right in back? Charlie, how are you?" Captain Fuller yelled above the din. Affirmative replies came from the back. The crew and passengers were shaken but uninjured.

"We're taking on too much water to float for long. Let's get out of here. We'll meet at two o'clock off the nose."

the AC ordered. "Sergeant Balke and Airman Serchik, see to our passengers. Any quest – ." At that second, the power failed. They had no interphone communications and very little light.

The aircraft was filling rapidly and settling deeper into the ocean. In the cargo compartment, Sergeant Balke pulled an emergency light from the cabin wall and assisted the passengers toward the rear of the Jolly Green. The two crewmembers opened the top of the cargo ramp. Water had already reached that level and the brine flowed into the cargo compartment. They pushed out the 20-man raft and pulled the inflation handles.

Only a foot of airspace remained in the cabin. Instinctively, the medic inflated his LPU, and instantly bobbed to the ceiling. He began to struggle to free himself but the water wings kept him pinned. Serchik saw that he was panicking and swam to him. The man twisted and turned in a desperate attempt to free himself. The P.J. grabbed him from behind, pulled his knife and cut open the LPU. The airman then guided the shaken medic from the copter to the raft.

In the same few seconds, Captain Fuller and Lieutenant Ellison were also getting out. Charlie felt as if he were watching a movie, seeing the action in slow motion, but unable to do anything. Fuller pulled the handles on the escape hatch and hoisted himself out into the water. The lieutenant was just beginning to react; his seat harness was still on and locked as he turned to open the window. In the darkness with the water swirling around his shoulders, he became disoriented. He couldn't even remember where the quick releases were! One thought kept running through his head: it didn't happen this way in training—it didn't happen like this!

In desperation the copilot began to pound the side window. He then heard the other crewmembers calling his name from outside the aircraft. A vision of Julie flashed through his mind. Then recollection of a page in the Dash One showing escape exits. He began to calm down. Like fog had lifted from his mind, he quickly knew what to do. He grabbed the escape handle and pulled. He swam outward and upward, away from the sinking helicopter. When he broke the surface, he saw the most welcome sight of his life, a hand reaching out to help him.

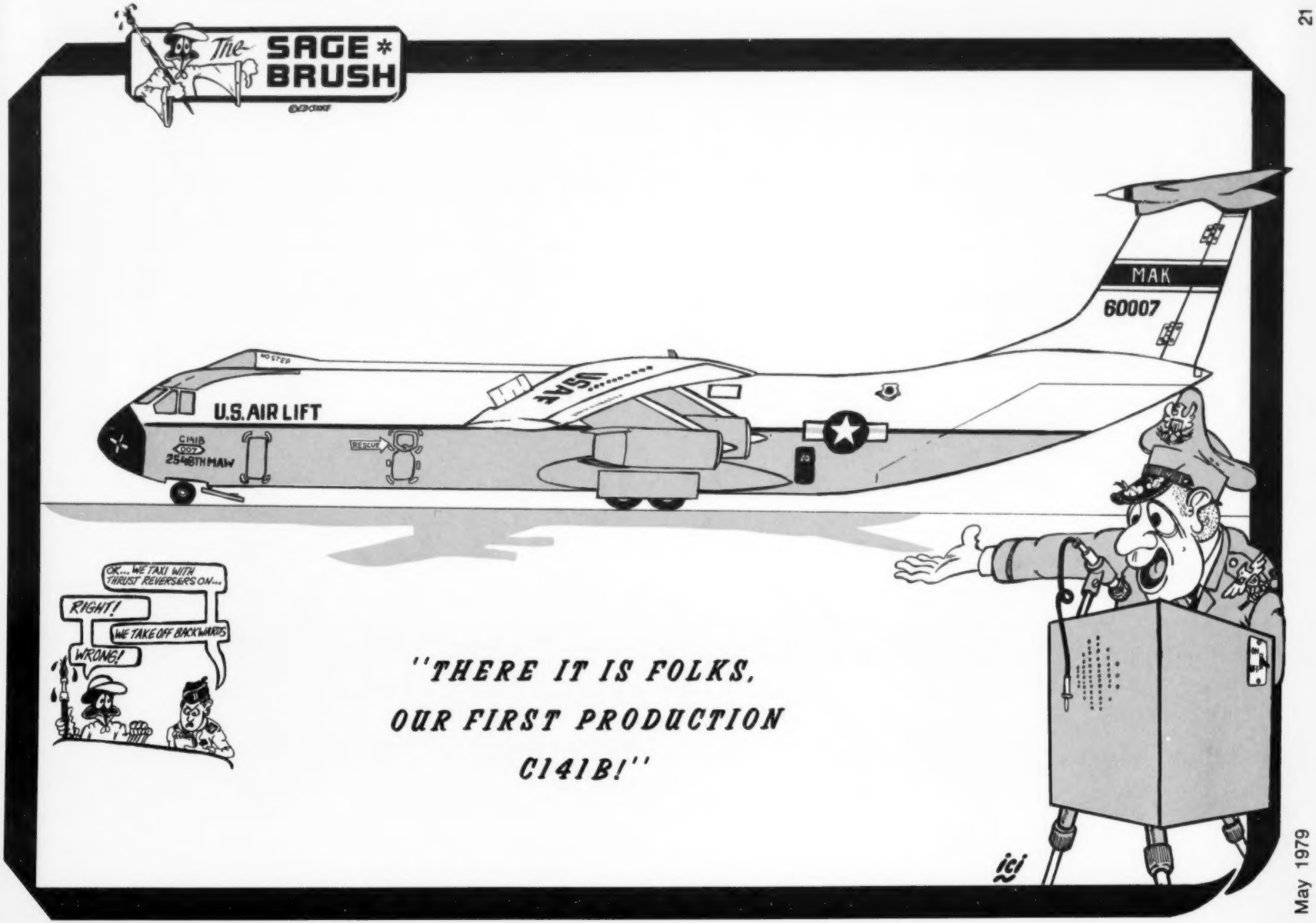
The crew and passengers of Rescue 476 spent only a short time in the water before they were picked up by a pleasure boat. But during that brief period, Charlie had time to reflect on what had happened to him.

Later the mishap investigation proved that a mechanical malfunction had torn apart number two engine just before contaminated fuel caused number one to flame out. The crew received lots of attaboys for a job well done.

As for Charlie, whenever he's asked about the accident, his tale sounds more like a safety briefing than a war story. He speaks of the lessons he learned, "In any kind of water emergency, before it's over, you're going to be in or under the water. If it happens at night, you'll have difficulty seeing—if you can see at all. Add panic and the possibility of the aircraft being inverted, and you are set up for a fatality—maybe yours. Know your emergency exists. Know where they are and how they work. And know 'em blindfolded!"

ABOUT THE AUTHOR

Lieutenant Raymond A. Beltz, a native of Johnstown, Pennsylvania, graduated from the University of Pittsburgh in 1975. While at Pitt, he was the editor of the Air Force ROTC monthly paper. He entered Helicopter Undergraduate Flight Training at Fort Rucker, Alabama, in April 1976. While in flight school, Lieutenant Beltz experienced an engine failure and forced landing. He graduated in December 1976 and is currently assigned to the 66th ARRS, Eglin AFB, Florida, where he is additional duty ground safety officer.


The SAGE BRUSH
MAK
60007
U.S. AIR LIFT
C141B
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RESCUE
USAF
OK... WE TAXI WITH THRUST REVERSERS ON...
RIGHT!
WE TAKE OFF BACKWARDS
WRONG!
"THERE IT IS FOLKS, OUR FIRST PRODUCTION C141B!"
ici

Some crews have to be led, but others charge blindly down the . . .

Primrose Path

Fog lay heavily on Los Rodeos airport in the Canary Islands, reducing visibility to 1,600 feet. The tower issued an IFR clearance to a KLM jumbo jet holding in the takeoff position, and the pilot read back, "KLM . . . cleared to Papa beacon; climb to 9,000. Right turn to heading 040, 'til intercepting 325 radial. We are now on takeoff."

"Stand by for takeoff clearance. I will call you back," cautioned the tower operator. He then turned his attention to a Pan Am 747 taxiing eastward on the runway toward the Dutch airliner, "Clipper 1736, report clear of the runway." The Pan Am jet was still 475 feet from its turn off the runway.

Moments later the Clipper's crew saw blurred lights ahead of them in the fog. They thought the lights were stationary, but then the sealed beams from the other giant airliner loomed larger. They were moving. The KLM 747 was roaring down the fog-shrounded runway at over 150 knots. Within seconds the two jumbo jets collided, and the shattering impact and ensuing conflagration took the lives of over 575 passengers and crewmembers.

Although that awesome aircraft accident and its aftermath occupied the pinnacle of public attention for almost a month, the FAA and NTSB were even more deeply concerned about preventing a repetition. They asked NASA to check the Aviation Safety Reporting System (ASRS) and see if runway incursions were a significant problem in the States. Technically the tragedy at Tenerife was a runway incursion; two aircraft attempted to operate on or immediately above an aircraft movement area at the same time. NASA provided 135 reports of runway incursions between 1 July 1976 and 30 June 1978. Reports by both controllers and pilots were perused; and as in the crash at Tenerife, the most common problem was lack of effective communication between some or all of the parties involved.

In the pilot-initiated reports, cockpit coordination and ATC-aircrew communication were the most often named cause factors, as this report from an airline captain illustrates. "After we crossed runway 26, the controller issued extensive taxi instructions while we were still running the before-takeoff checklist. My attention was divided between taxiing, doing checks, and listening to the radios. I evidently missed the instruction to hold short of 27R. I continued to 27R not thinking of it as a landing runway, because it's normally used for departures. [I first knew] we were crossing an active runway when I looked left and noticed an airliner about a quarter-mile out on final. I proceeded across the runway as quickly as possible. Tower sent the airliner around."

Here's another report that illustrates the old adage, "Just because you're cleared to do something doesn't always mean it's safe." After landing, the airline crew was cleared to cross 25R and then contact ground control. As the nose of their aircraft entered 25R, another airplane passed

overhead. Pilots estimated the miss distance at 50 to 75 feet. Apparently the other aircraft had taken off without clearance. Incidents like this strongly support the need for visually clearing left and right well before crossing any runway.

In summary, the pilot-initiated reports most often involved communication problems either within the cockpit or between the aircrew and ATC controllers. However, in 50% of all incidents in the study, potential tragedy was avoided by prudent and timely aircrew actions.

Turning to another side of the traffic control picture, we encounter a variety of reports about controllers. In general, communication problems among ATC agencies and controllers precipitated the following incidents. A near-collision between a corporate jet and a commercial airliner highlights the hazard of bad coordination between tower and ground controllers.

"After landing on 23L tower cleared us to turn off on taxiway bravo and then contact ground control. Ground control cleared us across 23R to our gate. Just before we started across the runway, my first officer hollered, 'Stop, somebody is on takeoff!' I slammed on the brakes, and a corporate jet passed right in front of us. Had we moved 10 feet further onto the runway, the smaller jet would have hit us."

Once again an alert aircrew kept an accident from happening.

Phraseology can also be very important when handling takeoff clearances. For the aircrew, close listening is often necessary to avoid a miscue. This controller's report provides a hair-raising example.

"I cleared 34 Papa for takeoff on runway 4, and told 87 Fox to taxi onto runway 7 and hold. Three-four Papa called to verify takeoff clearance and I advised, 'That's affirmative, minimum delay . . . traffic awaiting departure on runway 07. Cleared for takeoff.' I was momentarily distracted, and when I looked up both aircraft were airborne and rapidly converging. I gave 34 Papa a right turn to avoid the other aircraft and they passed safely by each other. I believe fatigue contributed to this incident, because two of us worked the day shift without a break. Even lunch had to be eaten in position. I am thoroughly bushed, and I still have one hour to go . . . ."

You've probably noticed that many of these near-mishaps involved cross-runway operations. Although most USAF bases have long, parallel runways, Dover, McGuire, Charleston, Kelly, and Kirtland are notable exceptions. One of the biggest problems for both controllers and pilots is the unexpected go-around when airplanes are sequenced with minimum separation on intersecting runways. In some of the ASRS incidents, a prudent go-around prevented an accident—in others, it made matters worse. Imagine the following . . .

"We were cleared for immediate takeoff on runway 31 and started our roll without delay. Another aircraft was on final to runway 22, but we felt that we had safe, though minimum separation. During our takeoff, the plane on final to 22 started a go-around. We crossed the runway intersection at about 300 feet AGL. The other aircraft appeared to be nearly level with us and perhaps over the approach lights for 22. The fact that he started a go-around put him closer to us than if he had gone ahead and landed."

Most of the reports in the ASRS come from civilian flight crews, but the Air Force does make inputs through hazardous air traffic reports (HATRs) under AFR 127-6. Although 135 reports is a small number of samples when compared to the total traffic count at all the airports in the U.S., it does indicate the existance of a definite problem.

The reports analyzed by NASA usually showed a breakdown in information transfer. In the case of the aircrews, the information they lacked was a timely and unambiguous clearance. As for the controllers, they required accurate information and coordination about other traffic and about the flyers' intentions.

Most of the reported runway incursions involved at least one aircraft taxiing. This is one of the few times when a crew can actually stop the airplane and clarify a clearance—before an accident has a chance to happen. Runway incursion mishaps can be prevented by efficient communication inside and outside of the cockpit, and alert, heads-up aircrews.

Deja Vu*

*(day-zha-voo), [Fr. lit., already seen], the illusion that one has previously had a given experience.

Pudahuel Airport

Santiago, Chile (Elevation 1,554 feet)

Located just northwest of Santiago, Pudahuel airport lies on a plateau between coastal mountains to the west and the Andes Mountain Range which boasts numerous peaks above 20,000 feet MSL, to the east.

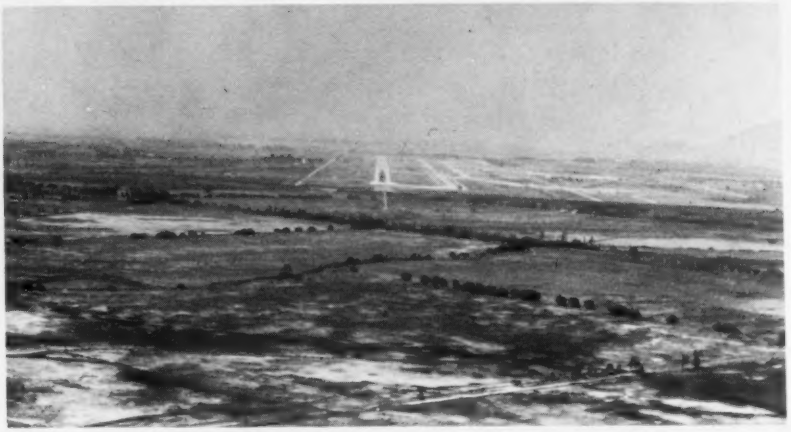
Several smaller fields near Santiago contribute to a moderate amount of light aircraft traffic, some of which isn't radio equipped and flies without air traffic control.

The highest point within five miles of the airport is a hill four miles southwest rising to 3,251 feet MSL. A 6,148 - foot mountain peak ten miles southwest is the highest terrain within ten miles. Another peak located 18 miles southeast is 10,530 feet MSL. Further to the west, the terrain averages 3,000 feet to 7,000 feet high.

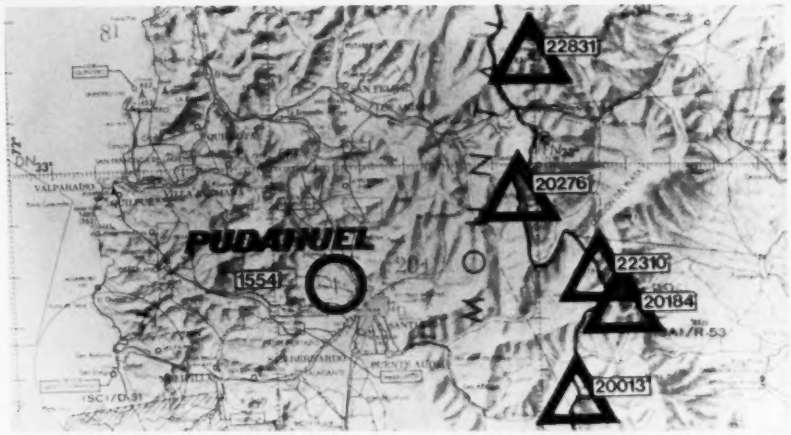
Pudahuel has one runway, 35/17, which is 10,496 feet long and 147 feet wide. The single parallel taxiway and parking ramp are to the west. Runway 17 is precision instrument equipped and has U.S. standard approach lights, but no overrun.

Runway 35 has no approach lighting, even though there are two published non-precision approaches. This runway does feature a displaced threshold and a paved overrun. Neither runway has VASIs.

—Adapted from ISD-Q6-445



Final approach to 17, high terrain is just visible to the right. Note unimproved overrun.



Andes Mountains to the east with peaks averaging above 20,000 feet.

Highway to the right would provide some ground lights during a night approach to runway 35.

C.R. TERROR!

Can jumping out of a perfectly good airplane turn C.R. into a skydiving enthusiast?

Bea-u-tee-ful!" exclaimed the Connoisseur of Comeliness as he watched Tassels Taylor descend earthward under her pink and white sport parachute. Lowering his Zeiss 100-power field glasses, he sighed, "But I'll never understand her passion for parachuting."

Ms. Taylor deftly deposited herself near C.R.'s picnic blanket, rolled her chute, and sprinted to the Overweight Observer. "Oh, Huggy Bear, it was just minimum fantastic—far out—a real trip. You've just got to try it! It's absolutely wonderful. I could commune with the birds. Sky diving has just got to be more fun than flying around in a stuffy old airplane," effervesced the jubilant jumper.

"Well, I suppose," grumbled the Rotund One. "Sit down, m'little pigeon, and refresh yourself with some fruit of the vine and modest snacks that I prepared whilst you were flinging your lovely body through the footless halls of air." C.R. guided the Pulchritudinous Parachutrix to a gormet picnic.

Tassels gazed quizzically at C.R. over her glass of pink Thunderbird, "I don't understand why you won't try sky diving. Rhip McChord is a great instructor—and very macho—besides it's a lot of fun."

"Well, I just don't like the idea of jumping out of perfectly good airplanes," emphasized the Ace of Airlift. "And I've seen people get hurt on personnel drops."

"That's the Army," protested Tassels. "This is parachuting for fun, not fighting."

"There's just no way, m'lovely. I've tried it once and I don't want to try again."

"Really? When did you ever jump out of an airplane?" she scoffed. "I've heard of all your exploits and I don't recall a parachute jump."

"Well, it wasn't exactly a certified jump," C.R. allowed, "but I did make a parachute descent

from an aircraft."

"Oh? That does sound like the real thing," Tassels tittered with anticipation of another of the World's Greatest's war stories.

"It's a little embarrassing, but it did happen a few years ago, just after MAC reclaimed the Herks from TAC," began the Aviator with Avoirdupois as he settled back on the satin picnic blanket. "I had accidently achieved disfavor with the wing weenies and they hand picked me for a special good deal: non-flying mission commander for a couple of C-130s detailed to the Army for experimental air-drops at dear ol' Fayettenam. Colonel Fang, the DO, made his desires quite clear, 'Terror, do whatever the Army wants; keep a low profile; fly safe and stay out of trouble—or else!'

"My only solace was that Sammy, Blinky and Ty Downs were on one of the crews. It really hurt my feelings to have to ride quietly on the crew bunk down to Pope. The squadron commander had instructed the young AC not to even give me a headset.

"I got the crews into good quarters downtown and then went to a briefing with the Army folks. The guys in green had some pretty strange ideas, but I recalled Colonel Fang's injunction and kept my mouth shut. The soldiers wanted to airdrop a big truck from 20,000 feet and then tailgate a couple of drivers after it."

"That sounds practical," interjected Tassels. "Then the drivers could hop into the truck and speed off to war."

"Yep. That's what the Army thought too, but they couldn't figure a way for the truck to pull its chute, so it could free fall most of the way like the jumpers. Finally, some genius decided to hang a 1,000-foot rope off the load with a weight on the end. When the weight hit the ground, the rope would go slack and fire a gun that deployed the main parachutes."

"You're kidding!" Tassels marveled.

"Nope."

"Well, what's this got to do with you jumping out of an airplane?"

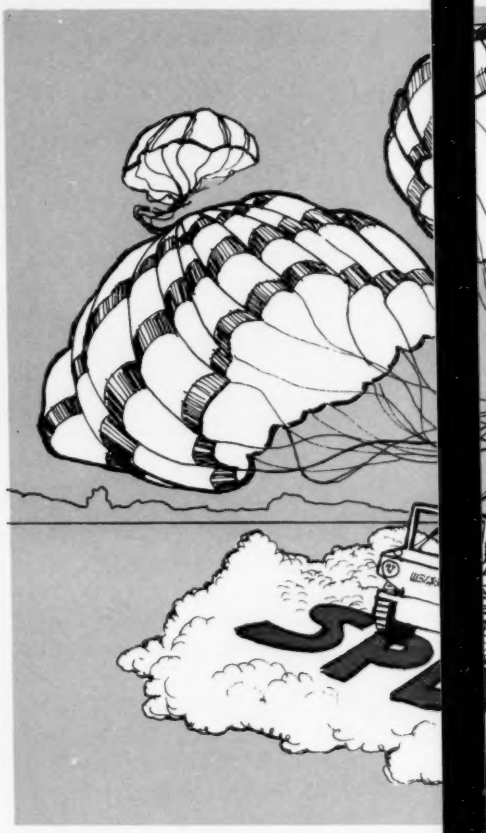
"Nevermind, it's all tied together," continued the Fat Fabler. "The next day the Army riggers had the plane loaded when I got there. Ty was sitting on the aft edge of the Herk's ramp with an expression of amused perplexity. I remember him saying, 'Major, you won't believe what's in there. And those Army guys are convinced that it will work.' Then he doubled over laughing and about fell off the ramp.

"Inside the cargo compartment was a gamma goat loaded for airdrop on—"

"Hold it!" interupted Tassels, "You said they wanted to drop a truck. Why would they drop a poor old goat?"

"No, no, Pussycat. A gamma goat is a big green six-wheeled, articulated, all-terrain vehicle. Anyway, there was a one-inch nylon rope attached to the back end of the platform, so I followed it around the cargo compartment. It finally ran along the left side of the airplane to a couple of sandbags on the ramp.

"Ty had recovered from his



hysteria and reminded me that if I was going to ride in back for the drop I'd have to wear a chute. My curiosity had the best of me, so I fitted a back pack and settled into a troop seat to wait for station time.

"Before long we were smoothly climbing through 10,000 feet and the rest of the folks in back were busily doing airdrop checks. We put on our oxygen masks and the AC depressurized the airplane. When Blinky called the six-minute warning, I moved back out of the way by the crew entrance door. The Army truck drivers got ready to jump.

"Blinky called green light, but nothing happened; Ty pulled

the manual release, and the extraction chute persisted in hanging to the bomb shackle. I heard the other loadmaster telling the AC about the malfunction as Sergeant Downs scurried around trying to secure the load. I thought this would be my chance to help, so I went to the back of the airplane to cut the strap between the extraction chute and the load. I figured the AC would be closing the ramp and door soon.

"Just as I applied my handmade survival knife to the strap, the chute swung out of the shackle. I jumped backward; but alas, I was too late. A split second later I heard the rumbling-freight-train sound of the load leaving the cargo compartment. I closed my eyes. Suddenly I felt a jerk on my right ankle and when I opened my eyes I was floating in space. I thought for a minute that I had been overcome by hypoxia, since I had unhooked from the oxygen system to go back and cut the strap. Then I realized what had happened. The rope was wrapped around my leg and I was tumbling through the air very near the rolling "livestock."

"Painful as it is, I'll have to admit that I panicked. I screamed and spread out my arms and legs. I was surprised to find myself uprighted and floating down like a glider. I kicked off the rope and the two Army jumpers drifting near me gave a thumbs up.

"I watched them and when they opened their parachutes I scrambled for my D-ring. I found it about the time I could make out the white stars on the jeeps below. Thankfully the chute blossomed and I descended to the sandy drop zone."

"So what happened to the truck?" Tassles asked.

"Darn thing nearly hit me. Since it was drogue stabilized, the load fell a little slower than I did. A moment after I landed I heard a soft thump and turned around just in time to see a giant parachute floating down over me.

"The Army folks helped me out from under the mass of nylon and shroud lines. They were really nice; in fact, they even gave me a ride back to the ALCE."

"But I still say that sky diving is fun," insisted the pretty parajumper. "Didn't you enjoy it just a little?"

The Rotund One furrowed his brow and ponderously announced, "Not at all."

"Okay, if you're that hardheaded about it, then there's no use in my introducing you to Rhip's assistant, Paula de Ring, over there," Tassels said as she pointed out a willowy woman with raven hair.

"Oh, I suppose I could reconsider," observed the Original Silver-Tongued Fox. "It's never too late for an old dog to try a new trick."

"I thought you might see it my way," chided Tassels as the Chivalrous Cherub helped her up.

"Let's go meet Paula."

Quick Stoppers

Driven To Distraction

Being involved in a mishap was probably the farthest thing from this Navy man's mind as he patrolled the flight line in a pick-up truck while on night security watch. Passing in front of a line of A-4s, he glanced over his right shoulder, thinking he saw something move near a hangar. With the truck still moving in an arcing left turn, he directed his attention aft toward the hangar. As he steadfastly stared to the rear, his vehicle struck one of the A-4s on the left forward side. When the dust settled, the driver found he was sharing his front seat with the crumpled leading edge of the nose landing gear door. That mysterious moving object the driver was eyeballing must have been the Fickle Finger of Flightline Fate which points out distractions in a dramatic way to those who work or drive near airplanes.

—adapted from USN *Weekly Summary*

Haste Makes Scrapes

You may be operating under the impression or assumption that whenever our airplanes are securely planted on the ground it is not possible to retract the landing gear. While it is true that the mechanisms are designed to prevent inopportune or unwanted lowering of the machine to the macadam; it is also true that, being a complicated mechanical device, the potential for something going awry is always present.

As the C-141 moved along the taxiway at a normal rate of speed prior to an intended departure, the aircraft commander called for the copilot to place the brake selector switch in "normal" position. Busy with adjusting his let-down plates (ironically enough) and getting ready for takeoff, the right seater failed to respond with all due haste to the pilot's request. So, deciding to take care of the matter himself, the AC reached across the cockpit and attempted to flip the switch to the desired setting. Because of his somewhat awkward position, the switch slipped through his fingers and the momentum carried his hand past the gear handle, which it struck with an upward swipe. With Murphyesque timing, the gear lever lock failed to perform as advertised and the gear handle was moved to the "up" position. An instantaneous "Oscar Sierra" and an immediate repositioning of the gear handle downward by the AC proved futile because in those few microseconds the retraction sequence had already begun. Both mains came up, while the nosegear remained extended. After running the post landing checklist and shutting down the engines, crew and pax evacuated safely. The Starlifter was not so fortunate, however, having sustained major breaks and bruises to a number of its primary and secondary structural members, landing gear doors, and a considerable amount of associated machinery as it settled to the ground. Some fixes are in the works to make sure that the gear can't come up unless the crew really wants it up, but in the meantime you should make sure that whenever your digits are in close proximity to the gear lever; it is only because you intend to raise or lower the wheels.

See-And-Avoid... The Saga Continues

Midair crashes continue to happen, even in broad daylight with good visibility. Sometimes, as in the collision last May near Memphis International Airport between a twin-jet Falcon and a single-engine Cessna, they can even occur with all the above plus both aircraft under positive radar control. This fatal midair mishap, in which six people perished, was largely the result of a "right hand not knowing what the left hand was doing" sort of situation among the controllers and was compounded by the aircrews' failure to exercise see-and-avoid tactics in a high density terminal area. The NTSB investigation revealed that the two aircraft were being guided initially by separate Memphis area controllers on different frequencies. The Falcon received a northerly heading and a clearance to 2,000 feet for a go around following a practice instrument approach. But his controller failed to coordinate with another scope watcher who was handling the southeast bound Cessna. A few seconds later the biz-jet was handed off to an approach controller who assumed that the appropriate coordination had been made before the transfer. Believing that the two aircraft he saw converging on his scope were already assigned to different altitudes, he gave no traffic advisory alert, and within instants the Cessna and Falcon collided. Although the failure of the controllers to coordinate and maintain separation of the two aircraft in accordance with established procedures and directives was cited by the NTSB as a primary cause for this disaster, visibility studies showed that the pilots—had they been alert—should have been able to see each other in time to take evasive action. The lesson is painfully simple: You've gotta keep your eyes peeled outside the cockpit for conflicting traffic—especially in high density areas—even when you're under the protective wing of ATC's radar.

Footnote to See-And-Avoid

An FAA administrator testified recently before Congressional committees that "see-and-avoid" will be the basic criterion in the ATC environment for some time to come.

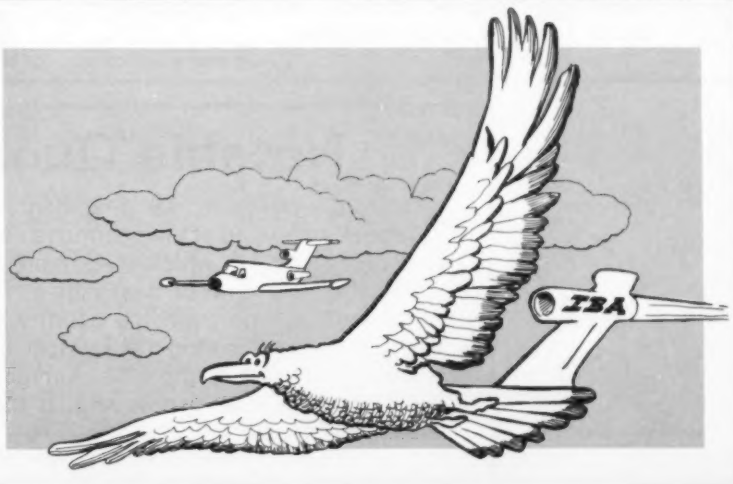
The forecast, which the Flight Safety Foundation sees as being "probably accurate," doesn't do much to reassure pilots transiting tricky terminal areas that they will have an electronic collision avoidance tool anytime soon.

According to the Foundation's *Accident Prevention Bulletin*, "Pilots can anticipate increasing cockpit workloads through the balance of this decade and into the 1980's under 'see-and-avoid' and should monitor their duties along with those of other flightcrew members accordingly."

It's A Fact!

Ever wonder how a soft, feather-covered creature can do so much damage to a hard, metal-covered airplane? Consider this: a two-pound bird crashing into an aircraft flying at 200 mph exerts a force of 8,000 lbs. At 600 mph the force would be 72,000 lbs. And then there's a 200-pound bird at two mph . . .

Air Safety Review



QS

Failure to Communicate

Here's an incident where an aircrew became the victims of a communications break down. A TDY comm unit erected two antenna support poles and strung very thin antenna wire across the normal departure flight path about 500 feet from a helipad. Next morning, the UH-1 crew saddled up for their scheduled launch. No one had told them about the antenna. Just after departure, the tower advised the chopper crew that they had possibly struck a wire. Although they had not seen the super thin strand nor felt anything unusual, they landed to inspect for damage. Two areas of chipped paint on the leading edge of the rotor blades confirmed that they had in fact clipped the antenna. About the same time as the incident, base ops people were notified by the comm outfit that the antenna in question was in place . . . too late for the tower to implement alternate departure route procedures which could have prevented the mishap. For the helicopter crew it was a close shave; for the TDY communications people, hopefully a valuable lesson in communication.

Your Other Starboard, Schmedlap!

Following a touch-and-go the tower called the Navy TS-2A, reporting what appeared to be smoke trailing the starboard engine. The crew noted no unusual indications in the cockpit and could see nothing unusual from their windows. On downwind, the crew observed a sudden bright yellow flash, but couldn't determine its origin. The pilot shut down the starboard engine which the tower said had been smoking since takeoff. On final, the rear observer noted oil shooting out of the port engine oil breather and then observed smoke coming from the bottom of the port nacelle. After landing, the oil pressure began reading low and the chip detector light came on. Was this a double engine problem? No, just a tower controller who didn't know his/her ports from his/her starboards and a pilot who shut down a perfectly good engine based solely on tower's radio transmission. Before shutting down the "affected engine," it's a good idea to make sure it's really "affected."

USN *Weekly Summary*

Notable Quote

As you well know, Mr. President, 'railroad' carriages are pulled at the enormous speed of 15 mph by 'engines' which in addition to endangering life and limb of passengers, roar and snort their way through the country-side, setting fire to the crops, scaring the livestock and frightening women and children. The Almighty certainly never intended that people should travel at such breakneck speed.

—Martin Van Buren (1829)

AFTER DEADLINES

DOVER WINS MACKAY TROPHY SECOND CONSECUTIVE YEAR. The Mackay Trophy, awarded for the most meritorious flight of the year, goes to a pair of 436th MAW crews for emergency airlift to Zaire in 1978. Lt Col Robert F. Schultz, 3rd MAS, and Capt Todd H. Hoghberger, 9th MAS, commanded the combined crews which delivered vital munitions and equipment to aid French Legionnaires in breaking the rebel hold on the town of Kolwezi. The flight demonstrated the crews' great perseverance and innovation, and the effectiveness and reliability of both the C-5 and strategic airlift.

AIRLIFT MUSEUM PLANNED. Starting out with small displays at the new Airlift Operations School at Scott AFB, and others at Pope, Little Rock, and Altus AFBs, the museum's purpose is to preserve the unique history of airlift in an entertaining and informative manner. Eventually, MAC plans to gather all the displays and artifacts in a central museum built on or near Scott AFB. If you want to donate items, contact MAC's historian at autovon 638-5754. Memorabilia should be sent to: HQ MAC/HO, Scott AFB, IL. 62225

AIRFORCE INSPECTION AND SAFETY CENTER (AFISC) has published its prediction of 1979 Flight Mishaps. They forecast seven Class A and ten Class B flight mishaps in MAC this year. Unfortunately, their 1978 prediction of 15 total Class A and B mishaps was exactly correct. The advantages of not fulfilling their 1979 prognostications are clear.

NEW STAIRWAY TO THE STARS. If environmental tests are favorable, the new super skyramp should become a familiar sight at MAC bases, loading and unloading passengers from C-5s, 747s and other wide-bodied jets. Major MAC aerial ports will get at least one, with larger installations getting two. All 24 should be delivered by the end of the year. The skyramp eliminates problems of sending passengers through cargo compartments and up steep ladders not made for mothers with small children or less agile travelers.

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Three guesses who's got the anti-hijack weapon today, Colonel.